THE GENESIS OF VARIANCE

The Development and Treatment of Sexual Fetish

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ABSTRACT

Sexual fetish is a sexual disorder characterised by intense recurrent sexually arousing fantasies centred around non-living objects. It is listed as an inclusion paraphilia for a non-living entity has been included into the individual's lovemap, which is the erotosexual map we all carry in our heads.

The current classification is that fetish is an impulse disorder. Its etiologies include solving the castration threat by substituting for the mother's castrated penis, classical conditioning and learning, traumatised lovemaps, temporal lobe abnormalities, imprinting errors and cerebral discrepancies.

Pharmacological therapies have traditionally been aimed at reduction of the sex drive using the antiandrogens medroxyprogesterone acetate and cyproterone acetate. More recently, experimenters have utilised LHRH agonists and GnRHa in their treatment with fewer side effects. The antidepressant fluoxetine and other serotonin reuptake inhibitors have shown success in treating fetish with minimal side effects and possibly an increase in normative sexual arousal.

Non-pharmacological treatments include aversion therapy, shame therapy, shaping and fading. Covert sensitisation aims to decrease the undesirable stimuli by pairing the fetish with a noxious setting. Orgasmic retraining seeks to shift the focus of attraction from the fetish to a more appropriate object.

This thesis proposes a different treatment based on the work of alcohol treatment. The rationale is that fetish is rewarding and involves the brains reward pathways. This therapy, involving fluoxetine and naltrexone with a dopamine blocker would seek to interrupt the reward aspects of fetishism, although it has yet to be empirically tested.

INTRODUCTION

Operational Definitions and Background

Historically fetishes have been known as 'sexual variations', 'sexual deviations', 'sexual anomalies' and in current street vernacular they are perverse, kinky or bizarre. 'Fetish' is derived from the Portuguese 'feitico' which literally means 'an object made both by art and skilfully conceived to symbolise a larger object' (Wise, 1985, p249). Its etiologies are unclear and its treatments are multitudinous. What is clear is that fetish is sexually anomalous and its behaviours are unusual.

As a society we seem intent on categorising behaviours according to some form of normal/abnormal scale and sexual fetish falls well within the abnormal parameters. However, many sexual behaviours present difficulties in determining whether they are conventional, experimental, unusual or some other such classification. The problem, obviously enough, is what constitutes sexually abnormal behaviour.

Of course, before we can answer this question we need to understand what one means by the words 'normal' and 'abnormal'. This is a question I have posed to numerous heterosexual people and naturally enough the answers were equally numerous. The underlying components were that 'abnormal' meant, 'Not what I practice' or simply a confusion or distortion of mainstream heterosexuality. What this

does is deny sexually anomalous practices the freedom to stand as behaviours in their own right, notwithstanding the fact that it completely disregards any homosexual or bisexual views. The few homosexual people I managed to question seemed less condemning of unusual sexual behaviours, given perhaps that homosexuality is not *the* predominant sexual choice. Individual impressions aside, we cannot underestimate the enormous variability of human sexual behaviour and the subgroup of variant behaviour.

There is a great penumbra of uncertainty around what is and what is not normal. Some of this is explained a little later, but for the most part I am content to refer readers to Gosselin and Wilson (1980, 17-25) for quite an extensive account of the normality arguments.

Alex Comfort (in Wilson, 1987, p1) states that 'Most of us now ask, at the practical level, not, "is this behaviour normal?" but rather "what does this behaviour signify for the client? Is it reinforcing or handicapping?", and of course, "is it socially tolerable?"', and in the words of Gudjonssen (1986), 'whether the behaviour of the sexually variant client meets 'normal' or 'abnormal' criteria is less important than what the particular behaviours mean to the person themselves and society as a whole'.

These are especially pertinent points as the rules governing what constitutes sexually variant behaviour are malleable. Consider the following example from New Guinea.

Prepubertal boys leave the woman's society of mothers and join the secret order of men, so to adopt the manhood of a headhunter. He has been having woman's milk since infancy, but now must feed on man's milk (the semen of mature youths and unmarried men) to move into puberty and grow into a man. The other young men have it as their duty to feed him semen, and thus practice what we would see as institutionalised paedophilia.

Upon reaching marrying age, he has marriage arranged and is thenceforth heterosexual. He could not, however, be a complete, fierce macho headhunter had he not passed through this homosexual phase (Money, 1988 p10).

The cultural differences are obvious as this illustration demonstrates. In New Zealand culture the paedophilic nature of the relationship immediately places it outside the bounds of the law[1] and outside the bounds of morality, and therefore outside the bounds of acceptability.

Changes in definition and acceptability are not however, limited to law and culture. They are also defined by religion, the moral code of society, with age and with the growth of knowledge. For example, it is only relatively recently that DSM[2] has omitted homosexuality from its index, and it is even more recently (1986) that the New Zealand

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[1] For a breakdown of the current legal situation in New Zealand concerning criminal sexual behaviours refer to Appendix I.

[2] The Diagnostic and Statistical Manual of Mental Disorders, published by the American Psychiatric Association.

Government passed the Homosexual Law Reform Bill. Importantly, these changes also remove the 'disease' label and therefore the medicalised view from behaviours such as homosexuality. The challenge therefore, is to examine sexually variant behaviours, sexual fetish in particular, through no other filters than the search for knowledge and understanding. For the purposes of this thesis 'normal' as a term has been disregarded; as an operational definition it is at best clumsy. We will take the commonly accepted and clinical stand that Fetishism is sexually variant.

DSM IV (1994, p526, 302.81) gives the following clinical characteristics of fetishism:

'The paraphiliac focus in Fetishism involves the use of non-living objects (the 'fetish'). The person with Fetishism frequently masturbates while holding, rubbing, or smelling the fetish object or may ask the sexual partner to wear the object during their sexual encounters. Usually the fetish is required or strongly preferred for sexual excitement, and in its absence there may be erectile dysfunction in males. This Paraphilia is not diagnosed when the fetishes are limited to articles of female clothing used in cross-dressing, as in Transvestic Fetishism, or when the object is genitally stimulating because it has been designed for that purpose (e.g., a vibrator). Usually the Paraphilia begins by adolescence, although the fetish may have been endowed with special significance earlier in

childhood. Once established, Fetishism tends to be chronic. A differential diagnosis is Transvestic Fetishism.

The diagnostic criteria for Fetishism are:

A. Over a period of at least six months, recurrent, intense sexually arousing fantasies, sexual urges, or behaviours involving the use of non-living objects.

B. The fantasies, sexual urges, or behaviours cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

C. The fetish objects are not limited to articles of female clothing used in cross-dressing (as in Transvestic Fetishism) or devices designed for the purpose of tactile genital stimulation (e.g., a vibrator)'.

DSM provides the standard clinical criteria against which behaviours are measured. It doesn't always allow however, for an overview of the phenomenon and the more personal, less clinical components. Fetishism as a behaviour is numbered among the paraphilias. The term paraphilia derives from the Greek *'para-'* meaning 'beyond the usual' and *'-philia'* meaning 'love'. Money (1984) lists upwards of thirty paraphilias[3], some of the names of which he has coined himself, and

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[3] An erotosexual condition of being recurrently responsive to, and obsessively dependent on, an unusual or unacceptable stimulus, perceptual or in fantasy, in order to have a state of erotic arousal initiated or maintained, and in order to achieve or facilitate orgasm.

gives an insight into their possible developmental explanations. The paraphilias have a twofold breakdown: in imagery as a personal fantasy (which is necessary if the paraphilic target is unobtainable) and as action as an erotosexual practice (p177).

Paraphilias and other erotosexual behaviours are the behavioural manifestations of 'Lovemaps'. The concept of lovemaps was introduced by Money and describes the erotosexual map we all have in our head. It holds a record of a person's erotic fantasies and the practices that are in keeping with those fantasies. Naturally, if the lovemap is distorted, the corresponding sexual practices and fantasies will also be distorted. Each paraphilia, and indeed each person has a unique lovemap, sort of like an erotosexual fingerprint. Commonly, Money mentions (p166, and see DSM description) the lovemap unfolds itself fully at puberty, perhaps showing itself as a nocturnal seminal emission (wet dream) or a masturbation fantasy. Once it is formed, Money states that the lovemap is particularly stable throughout one's life (p166).

The lovemap represents the individual's idealised lover and also the idealised schedule of sexuoerotic activity with said partner, either in fantasy or in reality. Money holds that a lovemap is classified as *normophilic* if it matches what those who define sexuoerotic normality decide. As we have already noted, these norms change culturally, historically, and may or may not agree with the statistic norm (what the

middle 50% of a community represent in identity, action and words), which is also subject to change over time.

A non-normophilic lovemap is classified as hypophilic, hyperphilic or paraphilic. Hypophilic lovemaps are insufficient or incomplete, hyperphilic lovemaps are too prevalent or dominant, and our particular concern, the paraphilic lovemaps are too unusual and different from the current norm. Obviously, paraphilic lovemaps are not socially condoned, as the normophilic are. The Fetishistic lovemap is paraphilic and is what Money terms an *Inclusion Paraphilia* - as something inanimate has been included into the erotosexual activity and into the lovemap (1986, 454).

Furthermore, the paraphilic fantasies cannot be "caught" from another person. Money maintains that they are not choices but are beyond willpower. Punishment is useless and persecution nourishes them. In short, they resemble closely an addiction. In terms of fetish, the man is addicted to something, and to performing something with it. Money states (1988, p148) that paraphilia is addiction to someone or something in the sexual context. It is highly specific and may be something that to most people is unrecognisable as sexual. The notion of addiction is one to be discussed in the next chapter.

He has defined the paraphilias in terms of six grand strategies; the fetish paraphilias being one of these strategies (see appendix II). Fetishism as a paraphilic strategy is, according to Money (1986, p464)

'the condition of being dependent in fantasy or actuality on a talisman or fetish object, substance or part of the body in order to initiate and maintain erotosexual arousal and facilitate or achieve orgasm'.

By including parts of the body in this definition (such as feet, a reasonably common fetish item) we are broadening the possibilities. Some could argue that attachment to body parts constitutes 'partialism', a discrete category, but for all intents and purposes the criteria are the same for diagnosis. To some extent we are all partialists in that we may prefer thin women, tall women, blonde women and so forth.

Irrespective of how specific the fetish actually is Money maintains that the erotosexual arousal of the fetishist is dependent on an item or token, which is to say something *less* than a complete sexual partner. He continues, saying that even if a partner is present and involved in intercourse the fetishist *still* relies on the fetish object, either in reality or in memory in order to function and perform successfully. Furthermore, the fetishist may also use the object to masturbate when alone as a coitus substitute.

Generally the fetish is related to the body in some way, being: worn (nappies, shoes); a body part (feet, hair); or a body function such as urine or faeces. While these may constitute the bulk of referrals for treatment, fetishes can also include objects that prima facie are not related to the body, such as the case of a young man with a fetish for

Austin Metro cars (De Silva and Pernet, 1992). Money (p445) states that fetishistic inclusion objects are typically sexy because of their texture (the hyphephilias or 'feely fetishes' such as rubber and silk) or their smell (urine or faeces, or in the case of Austin Metro cars, the exhaust).

The fetish itself may be something small and inconspicuous, such as a garter, which the man may require his partner to wear, or entirely consuming, for example, men who require their partners to wear elaborate rubber outfits.

Marks (1972) quotes Gebhard (1961) who suggests that Fetishism is a *graded phenomenon.* The grading begins with a slight preference; moves onto strong preference; continues to the point where the token is necessary for sexual activity, and finishes at the extreme of the continuum where the fetish item substitutes for a living partner. This provides the precision for diagnosis that DSM requires, despite the difficulty in determining when one point on the continuum has moved into another. DSM suggests that the fetish is required or strongly preferred, so we can formulate some idea of when exactly the label of fetish can be applied. Also, fetish is not exclusively a homosexual nor heterosexual condition. Most studies included both subgroups.

As noted earlier, one of the diagnostic criteria for Fetishism, listed in DSM IV is that the "fantasies, sexual urges, or behaviours cause clinically significant distress, or impairment in social, occupational, or

other important areas of functioning." Again, this can be open to interpretation. Gosselin and Wilson (p51-53) cite the case of 'Mr A' who was a devoted rubber fetishist. Happy with his sexual expression, Mr A had developed a sexual relationship with Miss Y, herself more than partial to rubber. Neither feels any compunction to change their sexuality. They are not distressed in any fashion (save that Mr A is married and neither wish their relationship publicised, feelings no different from any other extramarital affair) but are by definition, fetishists. Gosselin and Wilson also give information on fetish Clubs where fetishists can congregate with no fear of embarrassment or prejudice. For example, the appropriately named MackIntosh Club for rubber raincoat fetishists - a name obviously and presumably intentionally ambiguous (p29). The examples by Gosselin and Wilson, and indeed nearly every other author highlight a significant characteristic of fetish. By far the vast majority of fetishists are male; Miss Y, as described above, is indeed unusual. For this reason, references to fetishists will be using the terms 'he', 'him', 'men' and so forth. Given the lack of information on female fetishists, and the preponderance of male fetishists, this work focuses entirely on men. Men make up the great bulk of sexual variants, and thus the great bulk of research. Finding research and relevant data for fetishism however is not such a simple task.

Traditionally, behaviours defined as variant or deviant are illegal, although there are some exceptions. Sexual fetishes are behaviours

which, while they may distress the individual, are not in and of themselves illegal, and this poses the next challenge. Data on the motivations for paedophilia and other sexual offences for example, are relatively easy to obtain through the legal system in that the behaviours are punishable by incarceration. Even in this situation the data may not represent the full cross-section of paedophiles. The process to collect information for one case study requires that:

1. The offender must be caught

2. The offender must be tried

3. The offender must be convicted and sentenced

4. The inmate must then be willing to participate in research.

The fetishist generally only comes to the attention of researchers for one or more of three reasons:

1. He self-refers for treatment as his behaviour is disturbing or handicapping to him;

2. He refers as his behaviour is 'unacceptable' to his family or partner;

3. He commits an offence which is fetish related, for example, stealing women's underwear to help satisfy an underwear fetish (Adapted from Gudjonssen, 1986).

The result is a paucity of case studies and literature in comparison to other sexual behaviours such as child molestation. To obtain the

necessary empirical data, relevant to New Zealand, requires time and resources beyond the scope of this thesis. As such, the examples and case material has been drawn from other researchers, to whom I am indebted.

CLASSIFICATION OF FETISHISM

Models

The importance of classifying fetishism correctly becomes apparent when we seek to determine what is the best care plan available for the individual client. If we subscribe to a psychoanalytic model then drug treatments become a null option. Should we take fetishism as a compulsion, the guidelines are different from those of an addiction. This chapter looks at the categories of classification. This is different from the etiology of fetishism in that all of the categories may be biologically based but our diagnosis tells us which label to apply.

Paraphilias are not behaviours that are socially sanctioned. Kafka and Prentky (1992) list the *Non-Paraphilic Sexual Addictions* which include behaviours like compulsive masturbation. Unlike paraphilias, masturbation is not listed as a sexual disorder and is considered part of normative sexual behaviour. In NPSA the behaviour increases in frequency so as to be impairing. The distinction between paraphilia and NPSA lies in the cultural and social acceptability. At one stage masturbation was considered the root of insanity, and homosexuality a disease. With changing social values and greater understanding these are now accepted behaviours. Paraphilias on the other hand are not. Should it happen that fetishism becomes socially acceptable hen presumably DSM will eliminate it from its index and it will become

part of normative arousal. If the incidence of use is impairing then it is likely to be labelled as NPSA.

The fact the NPSAs are called addictions and paraphilias are not perhaps hints something of their etiologies. Kafka notes however (1991, p60) that there is controversy over whether the form of these disorders constitutes an addiction, a compulsion, hypersexuality, or impulse control disorders.

Addiction is a term usually applied to substances and implies dependence upon the substance and behaviour that is centred around it. The addict will consume his chosen substance whereupon he will feel fairly immediate gratification from his craving. The effects are short term and he may soon feel guilt and shame for his actions. His next actions typically revolve around organising the next fix. In these terms of reference the fetishist enjoys his sexual experience but may also feel guilt and shame afterwards.

The current addiction model of sexual disorders sees them as 'forms of pleasure seeking that have become habitual and self destructive' (Stein, Hollander, Anthony, Schneier, Fallon, Liebowitz and Klein, 1992, p267). There is some substance to the model. The behaviours are indeed similar and both are preceded by intense thoughts about the next instance of abuse. The fetishist is addicted to his fetish item. Unlike the drug dependent, and fortunately for the fetishist, he can rely on memory and fantasy if his particular fetish is not available. This

sets him a little apart. Money too comments on the similarities, saying the paraphilia is an addiction to someone or something in the sexual context (1988, p148).

An alternative model postulates that the paraphilias are compulsions, or more precisely that they lie on a compulsive spectrum. At one end are impulsive behaviours and at the other are the compulsive behaviours. Coleman suggests that compulsive sexual behaviours (CSB) are typically driven by anxiety-reduction mechanisms rather than by sexual desire (p320). It seems to be here that difficulties arise when we endeavour to establish client motivations (anxiety reduction, sexual desire, or both as the two are not mutually exclusive) for indulging in fetish. He differentiates between paraphilic CSB and Nonparaphilic CSB.

The paraphilias are currently classified as impulse disorders, but there are advantages in working with the other models also. This thesis accepts the current view and also the addiction model. Lack of impulse control could be one of the underlying feature in addictions which leads the individual to constantly seek or plan his next consumption.

THE BIOLOGY OF SEXUAL DEVELOPMENT

Conception to Maturation

To understand the development of a sexual variation it is useful to have an understanding of things from the beginning, as they are implicated in events later on. Thus, we will take a look at the in utero development of the sexual organs. Whether we are going to be a male or a female is decided at the time the sperm fertilises the egg. The process thereafter, is somewhat more complicated.

Human beings are biologically designed to reproduce. We have two sexes with different reproductive structures. Sexual reproduction usually requires two people (a woman and a man) to have penile/vaginal intercourse and for the man's sperm to fertilise the woman's egg. For an embryo to become a male relies on a gene on the Y chromosome from his father's sperm called the *testis-determining factor (TDF).* An embryo without the Y chromosome will not have this gene and will develop as a female. In short, TDF determines sexual differentiation.

Initially the embryos are identical. Ovaries and testes develop from the gonads which are exactly the same in males and females up to seven or eight weeks after conception. At this point one of two things happens: TDF causes the undifferentiated gonads to develop as male and the inner layers of the gonads form into testes, or TDF is lacking

due to the absence of the Y chromosome and the outer layers of the gonads form into ovaries. This development rests on a protein called the *H-Y antigen,* production of which is controlled by the TDF.

At this time the other internal sex organs are getting ready to shift into action. They are *bisexual,* or simply, the embryo has the necessary equipment to form male and female internal sex organs. From about eight weeks onwards the internal sex organs develop, male at the expense of female and vice versa. The important systems here are the *Wolffian* and *Müllerian systems.* The Wolffian system will become male and the Müllerian female. This is done by the presence or absence of testes.

If testes are present, they produce two types of hormones. One, a peptide hormone, inhibits the development of the Müllerian system and is aptly named the *Müllerian-inhibiting substance.* This is known as a *defeminising* effect as it destroys the potential female system. The embryo is now not female, but as yet is not male. Enter the other group of hormones. These are the *androgens* (andros = man, gennan = produce), and these have a *masculinising* effect as they stimulate the Wolffian system to develop. The key hormones here are *testosterone* and *dihydrotestosterone.*

The external genitals are those we can see. In contrast to the internal genitals which develop from two sets of systems, the external genitals develop from the *same* precursor; the *same* tissue develops into the

penis *or* clitoris for example. If testes are evident, they will produce androgens, and the external genitals will become male. If nothing happens, the tissue will develop into the female genitals. This gives rise to the legend 'Nature's impulse is to create a female' which basically holds that if *nothing* happens to an embryo, it will develop as a female.

Humans with *Turner's syndrome* bear this out. They are born XO, that is to say they have only one sex chromosome, the X. The Y chromosome is obviously not present, so H-Y antigen is not produced, and therefore testes do not develop either. For some reason, ovaries are not produced, and yet people with Turners syndrome develop into females - with female internal sex organs (Carlson, 1991, p318).

So, the developing child becomes a boy or girl thus. If H-Y antigen is present, testes develop. It testes develop, they release androgens, which masculinise the foetus, by stimulating the Wolffian system, and they release Mullerian-inhibiting substance which defeminises the foetus by inhibiting the Mullerian system. The internal genitals develop from two systems, and the external from one; one set of tissue can become male or female. If testicular hormones are evident, a male develops with appropriate genitals. If nothing happens, a female develops.

Obviously, to make a male requires much more effort and is more complex. These circulating hormones that the male or female is

secreting also masculinise and defeminise the brain. Some believe that mens' and womens' brains are fundamentally different, as are their respective abilities. Because it takes greater effort and energy to make a male, there are many more opportunities for something to go *wrong.* Perhaps this is why most deviant people are male.

However, we have only discussed development of the gonads and genitals. Sexual maturation occurs later in life, beginning at puberty. The hypothalamus secretes Gonadotrophin-Releasing Hormone (GnRH) which stimulates the anterior pituitary gland to secrete two gonadotropic hormones. These gonadotropic hormones then stimulate the gonads (testes or ovaries) to secrete *their* hormones. These hormones are responsible for maturation. The hormones that the anterior pituitary releases are *follicle stimulating hormone* (FSH) and luteinizing hormone (LH). In the female these hormones are responsible for producing an ovarian follicle and luteinizing it. In the male, they stimulate the testes to produce sperm and secrete testosterone. The ovaries and testes secrete estradiol and testosterone respectively, which effect the physical changes we associate with men and women as opposed to boys and girls.

Throughout the animal world these physical differences are usually obvious. So too are the sexual behaviours. Females present, and males mount, penetrate and ejaculate. Not so with humans however. There are not strict guidelines for sex. For sure, males penetrate females (usually), but that is about as far as the similarity goes.

Humans are certainly creative when it comes to sexual behaviour, witness Kama Sutra as an example. There are specific brain structures which do regulate sexual behaviour to a certain extent. We will look at males only, as they are our sample group. The medial preoptic area (MPA), rostral to the hypothalamus, is vital in male-typical sexual behaviour. If destroyed, or ablated, sexual copulatory behaviour is decreased or ended completely. This is only copulatory behaviour though, not sex drive. Monkeys with damaged preoptic areas continue to masturbate (Le Vay, 1993, p72). It is highly receptive to androgens, and much larger in men than in women, in one nucleus. This is the sexually dimorphic nucleus (Carlson, p341). Le Vay remarks however that this is in fact erroneous. Evidently the sexually dimorphic nucleus in rats is in a different place from that in humans. He lists thereafter three nuclei in this area, saying that only one of them is sexually dimorphic and this is more properly called the Interstitial Nuclei of the Anterior Hypothalamus (INAH). The important nucleus is INAH 3 (p76).

These areas are only responsible for sexual behaviour, and the hormones (especially testosterone) are only responsible for sex drive. An ablated MPA and decreased testosterone in fetishists would decrease behaviour, but not the problem. Carlson (p342) notes that the temporal lobes seem to play a part in modulating sexual arousal and direction of that arousal. This is an issue we will return to in the next chapter. The biology of sexual development is intricate and in

the majority of cases occurs free from errors. For this thesis it is the errors which are more relevant. Can fetishism be pinned on structural impairment, or hormonal abnormalities or gender differences in brain structure? These questions will be answered in the remaining chapters.

THE DEVELOPMENT OF FETISHISM

Etiologies

The development of fetishism is relatively unclear. To be sure, the theories are many and varied, each with its advocates and adversaries. This chapter aims to present the major theories as they stand today and endeavours to draw them together coherently.

Often it is difficult to distance ourselves from other animal species. This is especially noticeable when we look at the vast number of physical similarities between humans and high order primates, such as gorillas and chimpanzees. Our capacity for speech and top level cognitive functioning separate us. This section raises some interesting questions which suggest that we may not be as removed as we thought.

In evolutionary terms, the goal of the individual is to procreate their own genes. Obviously humans do this via sexual intercourse between a man and a woman. Each invests in the young: the woman, provides one large, nutrient rich egg and the male donates millions of tiny sperm. The egg is costly in terms of the energy needed to produce it, whereas sperm are produced in their millions with a minimum of effort. This difference sets up the dimorphism we find in later life; in body shape and size, potentially in mental skills, and in sexual behaviour (Wilson, 1987, p86).

Because we reproduce this way, with the female carrying the child during gestation, different strategies are used to procreate genes. Males, with their multitudes of sperm, available fairly much on demand, are able to fertilise numerous females. Females, on the other hand, can be fertilised only once. The result is that females will select the one best mate, while males are able to impregnate as many females as possible. Wilson suggests that this is the reason that men are more inclined towards casual sex and novel partners, while women prefer stable loving relationships where the male's attention is with them. He continues, suggesting that this may be useful in understanding why paraphilia is almost exclusively a male problem, (85-87). If it is an instinctive quality of males to fertilise as many females as possible (harem building), then some *must* miss out. The question remains then, what do those who miss out do? Wilson points out that it makes little difference if there are some males that are removed from the breeding pool; the females will still be fertilised by the remaining males. If a female were to adopt variant sexual practices, she would not be impregnated, which means the species as a whole suffers (p91). In a survival of the species sense, it matters little if some males prefer faeces or feet to females - the species will live on. Wilson cites La Torre (1980) who supports a dominance-failure view. The thought is that those men who 'fail' in reproductive attempts turn their attention elsewhere. La Torres' work showed that when ego-deflatory feedback was given to male students (feedback

which suggested that women found them unattractive) their interest in women as whole, living entities decreased, while their response to impersonal female approximations like underwear and shoes (fetishes) increased. Gosselin and Wilson (1980) also provide support for this argument, claiming that most types of sexually variant men tend towards shyness and introversion. Other responses to failure could include taking forcibly what one has missed, as in rape or sexual coercion or taking things into one's own hands, or masturbation. These notions are interpretations of fetishism only. Stronger evidence for an evolutionary base to fetishism comes from primate studies.

There is the fascinating study of the chimpanzee that exhibited sexual arousal toward a rubber boot. He would approach it, gaze at it, handle it, and touch it with his penis which had since become erect. Soon after, he would masturbate, ejaculate, and then consume the ejaculate, all of this irrespective of whether the boot was worn or merely placed in view in front of his cage. Incredibly, in the same zoo was the baboon who experienced erection over a boot also. In this case he did not self-stimulate or ejaculate, and his reaction was more intense when the boot was worn (Epstein, 1987, 143-144).

Unfortunately, due to the inability of the great apes to speak, we cannot gain a subjective viewpoint of the attractiveness of the boots. Clearly there is a similarity in these apes' behaviours and the behaviours of the human fetishist. Like all fetish tokens, the boots exerted a 'pull', either when located visually, or in mental imagery, and

here again we are at a loss to explain the memory/fantasy component of the apes' excitement. We are also unable to examine the history of the boots in the lives of these apes. Was there a critical incident? Was there gradual exposure over time associated with sexual arousal? What is the brain activity like in the temporo limbic system, oft quoted in relation to fetish (Kolarsky, Freud, Machek and Polak, 1961; Mitchell, Falconer and Hill, 1954; Epstein, 1961). Memory (and presumably thus some degree of fantasy) is a limbic system function, the structures of which are evolutionarily old, older than those parts of the human brain which make speech possible. So too are the brain structures involved in sexual behaviour. Obviously, it makes little sense to evolve speech if we have not evolved a system of keeping the species alive. Can we take this to mean then, that acquisition of a fetish is possible because of evolutionarily determined brain structures, which existed before the current manifestation of man evolved and therefore the ability to speak? If fetish is indeed based on evolutionary developments, as this chimp and baboon would seem to indicate, the underpinnings would presumably be biological. As we have already seen, the vast majority of fetishists are male. This too would suggest that fetishism has some biological component.

Wilson notes two important factors. Firstly, an Instinctual mechanism called *innate releasing mechanism* can limit the range of potential sex objects. Generally, men prefer women, male chimpanzees prefer female chimpanzees and so forth. The correct technique for mounting

and intromission may take a little practice, but the target is usually right. Pinkava supports this. He agrees that sexual behaviour is indeed innate; that we are born with the ability to be sexual, and with the goal to reproduce, but suggests that fetishism cannot be explained simply by an error in the innate mechanisms. He remarks that the typical development of the human sexual being begins with substitutory and inadequate sexual activities, and we follow some innate guideline. Fetishism is a variation on the sexual theme which has incorporated a non-living entity into the sexual act. This he claims would not be something that happens as a result of a disturbance in the flow of our innate mechanisms, but rather that some kind of learning has taken place (1987, p119) as the object is inherently non-sexual, but has been granted the magic of attractiveness by the fetishist. This is our second mechanism: imprinting. After all, how can an innate releasing mechanism possibly prepare an organism for acquisition and incorporation of safety pins or rubber as fetish items in sexual practices. Notwithstanding the fact that safety pins and rubber hadn't been invented 300 years ago, let alone when modern man evolved.

The effect of imprinting is to delineate further the range of stimuli specified by the IRM, which to a degree relies on the available visual stimuli at sensitive periods of development (p105). Like any form of neurology, these can go awry, with the organism fixated on same sex targets, different species targets, or objects. In fetishism, the object

has been imprinted upon, and as DSM IV lists, typically by puberty, although often much earlier in childhood. It can be seen that characteristics of fetish icons have gender associations, are often worn close to sexually arousing body parts (lingerie, shoes) and visual attributes that may remind one of the genitals (wet, shiny, furry or having a unique smell).

Epstein remarks that what characterises the fetishist is more the overspecification and exclusivity of the fetish than a misdirection of his imprinting. In other words, he has essentially imprinted upon a female, but zeroed in on a feature (feet, hair) rather than on the whole entity. His fetish item may be a representative of female features (lingerie) and so on. Notable, however, are the sneeze fetishist (King, 1990) and the Austin Metro car fetishist (De Silva and Pernet, 1992). It could be argued that these are imprinting errors, although it would be rather more difficult. Sneezing is a *behaviour* rather than an object, which could be likened to orgasm and the Austin Metro reminded the client of a child's face, with the exhaust being similar to excretive functions (ibid 304,305). It can be done, but the connections are somewhat tenuous.

What is important here is the impact of the environment. It seems unlikely that any condition is solely biological or solely environmental in this sphere. The effect of the environment is clear when we examine ethological studies.

Imprinting errors may not account totally for fetishism, but its support is strong. Fetish has been identified in infrahuman primates, so its genesis is probably biological. Imprinting and IRMs provide a solid argument for fetish in species generic terms. The question that humans, as animals, raise is one suggesting that we are different from other animals because of our advanced cognitive abilities. Epstein shows a flaw in this rationale (p146). As humans, fetishists approach their fetish object, fondle it, manipulate it, maybe rub their penis against it and so on. The touching and contact engenders a sense of possession. Repeated, prolonged contact enhances it. The object is incorporated into the organism, possessed by it and used by it. As language and brain associations become more complex with the developing organism, the object has a more potent meaning, for there is an increase in its associative linkages. The fetishist has access to descriptive, emotive language, access to glossy, high quality publications (for example 'Shiny', a rubber enthusiast's magazine), perhaps contact with similar fetishists and all of the reinforcement he gets from himself, sexual pleasure, and other people. The result is that possession and acquisition became more enriched. The answer to the question is 'yes', humans are different, but the abilities that set us apart are precisely those which enable the fetishist to become *more* attached to his object or object. The associative power is far greater in the human than in infrahuman primates.

Where then, is the connection between the chimpanzee and baboon, and modern man? Somewhere, there has been a transmission of a biological substrate through genetic means. The genetics are less important here, and less open to study. The biology is clearer.

Sexual behaviours are innate, although we learn precisely how to do it. We are born with sex organs for a reason, so it is only fair to presume we are also born with some idea of how to use them. It would seem highly unlikely that for such an important aspect of behaviour which ensures the survival of the species, that the development was left to chance learning. Were this the case, surely we would all be fetishists of one form or another. So it is a safe bet that reproductive strategies and sexual instincts rest on hard-wired brain circuits. This may only form part of a physiological base. Let us examine the evidence.

Chapter 3 explains the biological sexual development we all experience during adolescence. As males need more extensive work it is far easier for errors to occur. Flor-Henry (1987, p50) states that male specialisation hinges on testosterone and left hemisphere interactions. This slows the developmental pace of the left hemisphere. Flor-Henry concludes that the cerebral locus of sexual deviations could be determined by odd patterns of dominant hemisphere neural organisation. He also claims that emotionality, aggression, and sexual arousal are determined by the right hemisphere, being regulated by the left hemisphere's inhibitory

system. His support comes from rat studies (from which we may or may not be able to generalise to humans) and some interesting studies on humans. Heterosexual volunteers (p50) masturbated to orgasm while being EEG monitored. They showed great increases in theta range amplitudes, localised in the *right* parietal region. This was at the time of orgasm. Further studies showed right *temporal* lobe EEG activation during sexual arousal in heterosexual men to erotic auditory and visual stimuli. It seems clear that sexual activity is dependent upon right hemisphere circuitry. Flor-Henry maintains that in variant sexuality these are gender-dependent, based on the injection of testosterone in the foetus, giving rise to different cerebral organisation for males and females and thus different abilities which leave the individuals (males) more open to variant sexual programming (60-61). There is some controversy over the exact differences in male and female brains. Certainly, there seem to be many more sexually variant men than women. Whether we can base this on different cognitive abilities (men are allegedly better at visuospatial tasks and women on verbal tasks) which themselves are allegedly based on differing brain structure, is open to debate. However there does seem to be some difference in the degree of *specialisation* in the right hemisphere between females and males.

This is not to say that males and females are vastly different in ability, only that where particular functions are performed might be different. The notion is that in males, the RH is more specialised than in

females. If there is evidence of RH impairment in females, the LH can often take the function over as the female brain is less lateralised. The more lateralised male brain does not enjoy this luxury. This *could* explain why more men are variant, if variance is biologically based and localised more in the RH. Flor-Henry also remarks on evidence that in humans, the activating neurotransmitter dopamine, and the inhibitory neurotransmitter serotonin are lateralised (p57). Dopamine is evidently prevalent in the dominant LH, and 5HT more prevalent in the non-dominant RH. Sexual behaviour may be lateralised even at this level. If Flor-Henry and colleagues are correct, and the RH controls sexual behaviour under inhibition from the LH, then dopaminergic and serotonergic systems would also be implicated.

Wilson (1987, p108) reminds us that if fetish is a result of impaired brain circuits that are formulated before birth and a little after, perhaps we would see evidence of other indications of brain damage. The evidence is temporal lobe epilepsy. In a 1967 paper, Kolarsky, Freund, Machek and Polak reported a study on a number of epileptic men. While it would be foolish to assume that all people with temporal lobe abnormalities were sexually variant, Kolarsky et al did find a number of these epileptic men were sexually variant (one in five), so we may be able to work the reverse situation and wonder whether sexually variant men have some temporal lobe impairment. Other studies (Epstein, 1960; Epstein, 1961; Mitchell, Falconer and Hill, 1954) have also reported fetishists with temporal lobe disturbances.

The evidence is still unclear however. The temporal lobes (as part of the limbic system) are implicated in sexual behaviour (Langevin, 1992, p310), so it is feasible that abnormalities in structure will affect sexual behaviour. The biology of sexual behaviour generally, is complex and not completely understood. Many brain areas are involved to a greater or lesser degree and their exact interrelationships are still undetermined. Thus far, we can establish that the right hemisphere is important, as is the temporal lobe, and more specific structures like the medial preoptic area and at the neurotransmitter level dopamine and serotonin.

There are other etiologies of fetishism which need examining. Psychoanalytic theory works on symbolic relationships, between the fetish object and females, in particular their genitals. Greenacre (1960, p191) alleges that the fetishist endows his partner with 'the removable and adpatable penis'. By doing this he can include the penis himself in a multi sensory way and thereby 'bolster his uncertain genitality.'

Freud maintains that the fetish is a substitute penis, but not a substitute for any penis. Rather, it takes the place of a very special penis that in childhood had been extremely important but was then lost (1928, p161-2). The fetish clearly prevents loss. The 'special' penis is his mothers, and the loss is castration. The fetish replaces his mother's castrated penis as the boy cannot bear the thought of her being castrated. After all, if she once had a penis and lost it, he could

too. He is thus in denial of the fact that a woman has no penis and uses the fetish to ward off the castration threat he felt when seeing a woman's (mother's) genitals exposed (p163). The fetish token remains as an indicator of success over the castration threat.

Bak states that it may be a symbol of the penis, but that it may also represent the final instant in which a woman could still be regarded as phallic (1953, p285). Fetish has also been described as a split in the ego (Le Coultre, 1966) where the client simultaneously denies and accepts that a woman has no penis. There *is* no conflict here as he does not *consciously* know that his fetish item is a penis substitute (p791-792). Lastly, it has been seen as the result of early psychic trauma, trauma which is manifested by sexual deviancy or inhibited creative or intellectual work (McDougall, 1989). Psychoanalytic viewpoints are such that it becomes impossible to dispute them unless one does it using other psychoanalytic viewpoints. Here, I am willing to bypass it using the words of Wilson (p107) who says succinctly: 'The fact that non-human primates also show fetishistic behaviour would seem to argue against the necessary involvement of high-level symbolic thinking.'

One of the last major theories of fetish is one with not insubstantial support. It suggests that fetishism is a *learned* phenomenon. The theories developed after it was shown that some fetishists responded well to aversion therapy. The rationale is that they can learn to find it unpleasant, so they must have learned to find it pleasant in the first

place. Generally it was presumed that the conditioning arose from one critical incident. McGuire, Carlisle and Young cite Binet (1888) and Jaspers (1963) 'Perversion rises through the accidents of our first experience. Gratification remains tied to the form and object once experienced...'. The authors question this approach, saying that if this were true, all those children exposed to homosexuality during their childhood would now be homosexual[4]. They suggest instead that sexual deviations are learned through a much more gradual process. The event fades to a masturbation memory and changes with time (p185).

It is a well established evolutionary fact that males, given the opportunity, will copulate time and again if the female is *novel*, the so-called Coolidge effect. For humans, maintaining novelty is often an important part of a healthy sexual relationship. With masturbation memories, it is easy to see how a fetish item could grow to usurp the place of other sexually arousing stimuli. The original incident need not have been sexually stimulating (ibid p185), but eventually, the masturbation fantasy will become monotonous with time. To keep it interesting (novel) it must be altered. The original stimulus can then be incorporated more and more fully into fantasy and thereafter into reality.

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[4] Of course, this takes no account of the amount of exposure to homosexuality and ignores the possibility of critical epochs in a child's development when this kind of exposure may or may not have any effect.

To be sure, it is possible to condition sexual responses to originally non-sexual stimuli and "create" fetishism. Rachman engineered somewhat of a landmark study in 1966 when he established sexual responses to a pair of female boots. He projected photographic slides of pretty, naked girls onto a screen (UCS). For 15 seconds before the UCS was a slide showing a pair of black, knee length women's boots (CS).

The women were shown for 30 seconds, with 1-3 minutes between trials. This was necessary to allow any sexual response to diminish, measured by a penile plethysmograph. The Conditioned Response (CR) was taken as five successive sexual reactions. The first subject achieved this after 30 trials, subject two after 65 trials, and subject three after 24 trials. All three showed generalisation of the sexual response to other forms of women's footwear. In all three subjects the response was extinguished, showed spontaneous recovery a week later and was re-extinguished permanently.

In 1968 Rachman and Hodgson replicated the study with one difference. They included trials to ascertain *pseudo conditioning.* This is where a response to the CS (shoes) occurs even though conditioning has *not occurred.* This could happen because the subject is sensitised to the sexual response or is having concurrent sexual fantasies. To control for this the UCS was presented *before* the CS (backward conditioning). No pseudo-conditioning was found, and the previous results were strongly supported.

These experiments provide fairly potent evidence for a learning paradigm, but there are a few flaws evident. In the study, extinction was achieved by showing slides of the CS alone, and the response gradually decreased to zero. Extinction is difficult to achieve in fetishism treatment, which suggests that the responses were not learned initially. Rachman's subjects were reinforced to achieve conditioning, and not reinforced so as to achieve extinction. Wilson (1987, p106) makes the point that fetishisms are resistant to extinction despite the fact that they become detached from the original arousal source. A learning theorist could argue against this, suggesting that fetishes usually occur early in life, and thus the conditioning has taken place over years, and is therefore incredibly strong. Conditioning this strong cannot be eliminated quickly. Furthermore, Wilson holds that extinction occurs in the absence of reinforcement. We cannot be sure that the fetishist is not being reinforced. (This is discussed in Chapter 7.)

The other point is that of gender. If fetishism is a learned behaviour, the question again arises as to the lack of women fetishists. Surely if it were learned, then females would be as susceptible to fetish as males are. Here again we strike this issue and maybe in this respect it is more watertight, that there are cerebral and cognitive differences which mean that males develop (learn) fetishes and females don't. Perhaps Rachman and Hodgson could have used five males and five

females in their study to test the conditioning model. The problem that they would run into brings us to the next issue.

Only males have been studied, and visual stimuli were used. Studying females' arousal would possibly involve different methods of arousal such as atmosphere and touch. It is unclear therefore whether women could be conditioned to fetishism. Rachman and Hodgson used photographic slides, targeting the visual system. Any employee of any pornographic magazine knows that men are aroused because they *look* at the pictures. The number of glossy men's magazines are too numerous to count, catering for heterosexuals, homosexuals, bisexuals, and every other -sexual. They may involve people posing, or engaged in intercourse of most forms. There are very few magazines aimed to stimulate women visually. Flor-Henry reported studies where men masturbated to orgasm with visual and auditory erotic stimuli. Phone sex companies are obviously well aware of this too. (Whether the clients imagine that what they person on the other end of the line is saying is actually *happening* is an issue too, as this provides *more* visual input).

The adult movie trade works on the male's visual system, as does the strip show and most other avenues designed to titillate the male. That they are successful shows their mechanism is correct, and the importance to the male of visual input for sexuoerotic arousal (Money, 1988, p66).

In the chimpanzee, the female signals her sexual availability through the swelling of her genitals; they become large and highly coloured. This is an obvious visual cue to the male. Human males also focus on the visual aspects of prospective partners: breasts, buttocks and genitals. Of course, even naked, the female genitals are hidden in the normal posture, so perhaps males are less fixated there. Genital displays are not how the female human attracts a mate but attention is drawn to the breasts and buttocks. It is possible, that given the importance of vision in male sexual arousal, that errors occur, or that other stimuli become visually exciting, such as long hair or high-heeled shoes, by imprinting, or by learning. The *look* of the fetish token is important also.

Interestingly, the temporal lobes are implicated in visual recognition. People with temporal impairment can suffer from visual agnosia, which is the inability to recognise common objects by sight. Although purely speculative, there may be a link between temporal lobe dysfunction in fetishists and the visual nature of male sexual arousal. Perhaps the impairment in brain circuitry impairs the visual recognition of appropriate sexuoerotic stimuli? This is an area for further study.

Wilson notes that lower mammalian males rely on smell, while primates are visually oriented. He provides evidence from his own studies on male fantasy, where the content of the fantasies was centred around visual aspects. Fantasies typically included clothing (lingerie, nurses' uniforms) or were related to the visual emphasis of

anatomy, breast size, pubic hair, hair colour and so forth. The susceptibility of men to visual fixations on inappropriate targets is not due to greater visual acuity in males, but perhaps to the ease with which connections are made between visual stimuli and sexual arousal (p103). Here again arises the possibility of temporal lobe dysfunction.

The temporal lobes are implicated in visual recognition. Their impairment may play a part in greater susceptibility to inappropriate visual stimuli. Vision and sexual arousal are both very primitive functions. With the importance of visual stimuli to male sexual arousal, it is quite feasible that brain abnormalities could affect the innate hardwired circuitry which probably predisposes the male to target females, such that the visual system locks onto other stimuli. Again, this is a hypothesis that needs testing.

Kunjukrishnan, Pawlak and Varan (1988, p20) cite Gosselin and Wilson who explain the predominance of fetishism in males by emphasising the visual natue of fetishism, and once again the sensitivity of men to visual stimuli. They also point out the relevance of the biofeedback mechanism in males, in that males possess a very good biofeedback amplifier - their own penises.

There is one more issue that needs discussion here. DSM states that the fetish usually begins by adolescence, although may have been endowed with special significance earlier. Kolarsky et al note that

temporal lobe abnormalities usually occurred early in life. Wilson's theory of imprinting and IRMs is also based in childhood. Indeed, Wilson's theory requires visual or olfactory exposure to the correct imprinting stimulus, the female genitals. It is not so much the presence of another stimulus upon which the child imprints, but the *absence* of the correct stimulus at a critical time that causes the child to imprint elsewhere on a body part or non-living substitute. He cites support from a "frequently reported finding" that deviant men of all bents are from families that are sexually restrictive and do not permit nudity. Evidently, sexually variant men are also less likely to have seen pornography as children (p107). Wilson continues, saying that exposure to the female genitals in early childhood is essential for correct imprinting and development. Money ties all of these together in what he terms sexual rehearsal play (1988, p62). The concept is simple.

As children, we need to practice sex to discard incorrect behaviours and learn the proper ones. Insufficient access to rehearsal play denies the child the opportunity of "normal" development. He cites monkey studies where this is the case, and provides photo illustration of five to six year old boys indulging in play (p64-65). If this play is punished, or traumatised, the behaviours will be inappropriate and the lovemap (see chapter 1) will be variant.

The obvious problem with this theory is its testability. Any effort could see one facing molestation charges, assault, and so forth. The idea

that children are sexual beings is not new (Freud was expounding the notion 80 years ago) and yet is offensive to many. There is almost an unspoken plea from Money for children to have their play free from punishment and guilt and shame. After all, it is play, and is crucial to developing a healthy, respectful sexual nature. Money states emphatically (p134) that "as a society we do not want our children to be lustfully normal." If found practising or rehearsing, they are castigated, admonished, punished, all to prevent the natural acts from occurring. What occurs is lovemap impairment. To avoid punishment, sexual rehearsal play is hidden, masturbation is hidden and the lovemap is traumatised.

Money may perhaps be dramatic, but his thinking is very clear and insightful. Sexual rehearsal is not peculiar to humans, indeed it is a natural part of development for many animals. It is probable that, given our greater cognitive abilities, we are the only ones to punish it, inventing justifications such as seeing it as dirty, or the Devil's work, or some such explanation.

It can be seen that Wilson's theory fits quite well with Money's but we cannot ignore the cerebral aspects and possible temporal lobe dysfunctions and learning. Each of the etiologies has merit, and at this time it is uncertain whether one theory can be seen as *the* theory. Biological theories perhaps provide the most evidence, but it is likely that genetics, hormones, learning, relationships (peers and parents), reinforcements and orgasmic experiences (Wilson, p111) are all

implicated. Without yet naming it, we are essentially talking of the famed nature/nurture debate. How much of the development of fetish we can attribute to biology or environment is decidedly ambiguous. On that note, we can add that to some extent it all may be biological, as even learning has a biological base involving structural changes in neuroanatomy. This is an issue for later chapters.

PHARMACOLOGICAL INTERVENTIONS

Current Drug Treatments

Medroxyprogesterone acetate (MPA) has been used widely as a treatment for the paraphilias and for sex offenders in the United States since Money and colleagues first employed it in 1966 (Gottesman and Schubert, 1993, p182) in its injectable long-acting form. MPA is a potent antiandrogen more commonly known by its trade name - Upjohns Depo Provera®. As an antiandrogen, MPA works by lowering the level of serum testosterone in the blood to the same levels as before puberty. Its mode of action is quite simple.

What it does is inhibit the release of luteinizing hormone (LH) from the anterior pituitary gland. As mentioned earlier, LH stimulates the testicles to produce androgen. The result therefore is a decrease in the level of testosterone (especially) and other androgens in the bloodstream.

It is a synthetic hormone and is technically known as a synthetic progestin (Money, 1988, p211) for it has many of the physiological properties of progesterone and is in fact used in that form to suppress ovulation when using the birth control pill. Although similar to progesterone MPA does not work as a female hormone but rather as a precursor of male hormone (as progesterone is the precursor of testosterone) which thus tricks the body into processing it as a male

hormone. MPA competes with the body's own hormones for testosterone receptor sites. When these are filled, the pituitary stops releasing LH which means that testosterone is not produced. So MPA fools the body into thinking that it has produced enough testosterone as the receptor sites are occupied. The cells in the testicles that produce testosterone stop their output. The resulting drop in serum testosterone in the blood bears witness to MPA's efficiency.

The therapeutic actions of greater interest here however are the effects that follow from the drop in testosterone, namely: temporary decrease in penile erection and ejaculation; temporary decrease in sperm production (spermatogenesis); decrease in sexual tensions and a decrease in sexual fantasies and preoccupations (ibid, p233; Cooper, Sandhu, Losztyn and Cernovsky, 1992, p687), or more colloquially, a loss of sex drive.

Some of these subjective perceptions are not entirely the result of decreased testosterone. As MPA is a progestinic hormone it has action in the brain, acting directly on the hypothalamic sexual pathways. More precisely, MPA works on the more anterior part of the hypothalamus known as the preoptic area, and in particular the medial preoptic area. As we discussed in chapter 3, this area plays a major role in male typical sexual behaviour, and the effect of medroxyprogesterone actetate is literally to sexually soothe.

The effects of MPA are only temporary however as normal functioning eventually returns upon discontinuance of the regime. For this reason it is qualitatively different from surgical castration. The use of MPA does not completely halt testosterone production, it merely puts it into hiatus. Furthermore Money holds that when the treatment is stopped, the paraphilic fantasies *do not* return to premedication levels. He states that 'they no longer have the same tyrannical, addictive quality' (1986, p451).

There are some side effects to be aware of in the use of MPA. While the drug is not feminising, that is, men do not become women, the prostate and seminal vesicles temporarily shrink. Clients experience other effects including weight gain, lethargy, diaphoresis, leg cramps, headaches, dyspnea, hyperglycaemia, insomnia, nightmares and hypogonadism (Gottesman and Schubert, p182; Money, 1988, p233).

MPA is the drug of choice in the United states for treatment although it is not the only antiandrogen available. *Cyproterone acetate* (CPA, tradename *Androcur*) is used extensively in Western Europe and Canada in the same manner as MPA. Its mechanisms are the same and its effects are the same. Comparative studies of the efficacy of the two treatments report equal results (Cooper et al).

More recently, researchers have tested the effects of luteinizing hormone-releasing hormone (LHRH) agonists in combination with antiandrogens for complete androgen blockade. Rousseau, Couture,

DuPont, Labrie and Couture (1990) employed the pure antiandrogen flutamide (Euflex) with LHRH agonist in the treatment of a client with severe exhibitionism. LHRH agonists evidently achieve total medical castration, akin to MPA and CPA, but with only the side effects related to hypoandrogenism. Flutamide was used to complement the effects of LHRH-A and to ensure complete androgen blockade.

Following on from this work, Thibaut, Cordier and Kuhn (1993) tested depot gonadotrophin hormone-releasing hormone analogue (GnRHa) in six males with severe paraphilia. They too recorded promising results from these trials. For five of the six men the treatment ended their variant sexual behaviour, decreased sexual fantasies, and decreased sexual activities. They reported successful follow-ups up to three years after initial treatments.

LHRH agonists and GnRHa open up potentially promising avenues for treatment, given that the side effects are minimal when compared with MPA and CPA. However, for all the success of these drugs they have some failings for which we must allow.

Firstly, their aim, which is achieved successfully, is to decrease deviant fantasies and arousal and thereafter the behaviours. The issue underlying this is that while the clients may have variant fantasies and arousal to sexually unusual stimuli, they are people first and foremost, and as such have very real and important sexual needs which should be attended to. The effect of these drugs is to dampen

sex drive. This may be acceptable if the client is in danger of harming themselves or others, but in the case of the fetishist the behaviours may be quirky, or offend the modesties of some people, but in and of themselves they are not injurious. Drug treatments provide no compensation for the loss of libido in the fetishist (or other paraphile) who would very much like to have a sex life acceptable to him and his partner or partners. In that respect the medication only delivers half the necessary treatment, so in some cases the personal cost may be great.

Secondly, MPA and CPA are still the first choice pharmacological treatments and do carry with them an array of side effects. Some clients may query whether it is worth experiencing some negative side effects for a global decrease in sex drive. Of course this may be enforced by the justice system in the case of violent offenders but is unlikely in the case of fetish unless it is harmful to others and there are illegal behaviours involved. LHRH agonists and GnRHa appear to be a better choice at first glance, having minimal effects, although further research is required.

Thirdly, it cannot be guaranteed that upon cessation of the treatment the effects will lag. Money (above) maintained that paraphilic fantasies and behaviours do not return to pretreatment levels when treatment finishes. Thibaut et al provide conflicting evidence from the last subject in their study who relapsed within ten weeks from stopping treatment after the end of the first year (p445). Some of this

discrepancy may be due to the fact that the treatments are somewhat different in the initial stages, although the end effect is achieved the same way through the reduction of testosterone to castration levels. Further study is needed to determine the longer term effects of MPA and CPA in comparison with those of LHRH agonists and GnRHa.

What is certain is that the fantasies and urges do return. The extent to which this happens needs clarification on both qualitative and quantitative measures. Money believes that they no longer have the same intense quality as before, however client self-report may not be entirely correct. Furthermore, it may be so that the fantasies and so forth continue at a lower level than pretreatment, but a question of concern is just how far below. If the rebound is negligible and personally and socially acceptable then well and good. If the rebound is stretching to ninety per cent then not so good. Measuring this is a difficult task. Given that every client is different we may have trouble establishing what level of fantasy and behaviour is appropriate for that person, their partner and the wider society. For some, long term suppression with these anti-libidinal drugs may be necessary for the sake of safety. For others, different methods need to be introduced. This brings us to the last point.

Drug treatments do nothing to alter the *direction* of the sexual urges. Urges, fantasies and behaviours decrease, which is excellent if they are noxious or of concern to the client who wishes to be rid of them at any cost. Redirection of the sexual drive is perhaps more appropriate

for the fetishist, unless his treatment is undertaken specifically for harm reduction purposes. MPA, CPA, LHRH agonists and GnRHa provide effective interventions in the short term, but perhaps lack the ability to provide complete treatment for the sexually variant client.

In the last few years there has been an increase in the number of clinicians presenting papers on the usefulness of antidepressant medication in treating the paraphilias. Perilstein, Lipper and Friedman (1991) report the efficacy of fluoxetine (Prozac) in treating three subjects with paraphilia. They too note the difficulty of treating the paraphilias and reinforce the global reduction of sex drive as a result of antiandrogenic medication. Kafka and Prentky (1991) also employed fluoxetine successfully, suggesting that it may be far more selective in ameliorating deviant or unconventional sexual desire, while leaving intact conventional sexual desire. They hint that fluoxetine may even go so far as to facilitate normative sexual arousal (p356). Clayton (1993) also describes the efficacy of antidepressants, using clomipramine with her client.

The important thing here is the mechanism of these antidepressants. Both of them are serotonergic medications, known more precisely as Serotonin reuptake inhibitors (SRIs). As the name implies, these drugs work in serotonergic synapses, preventing the neurotransmitter serotonin from being reuptaken. The effect is that it stays in the

synapse longer and continues to work, before it is absorbed back into the cell that produced it.

SRIs and in particular fluoxetine, have been shown to be useful in treating depression (for which it was designed), the paraphilias, and is also used to assist in treating the eating disorders anorexia and bulimia where there is a depression component. It seems to provide broad spectrum aid for a number of conditions and will be discussed more fully in the following chapters.

Since pharmacological treatments induce a global reduction in sex drive and often some major side effects, without actually treating the problem per se, it would be unusual for a therapist to prescribe medication without undertaking some form of talking therapy. Gudjonssen (p203) suggests that therapists are looking to achieve two objectives: reducing the undesirable thoughts, feelings and behaviours, and increase alternative, appropriate behaviours. Within these boundaries many options are available.

COGNITIVE-BEHAVIOURAL INTERVENTIONS

Talking Therapy

This chapter focuses on interventions based on therapist/client contact. Some of them are overt behavioural strategies, some work at the level of subjective emotions and cognitions, and the remainder work on the physiological. A few of these treatments may not have been utilised in the treatment of fetishism, so their efficacy is unknown. However, the general principles underlying the approaches are adaptable to the characteristics of fetishism.

Sexually variant people present to therapists with a huge range of issues, and an even larger range of individual life experiences. To develop a treatment plan needs careful consideration of the client's needs, current situation and goals, as well as the therapist's responsibility to himself, his profession, his institution and his code of ethics. Crawford (1979, p151) proposes a comprehensive treatment package, paying attention to 'sexual dysfunction, anxiety, deficient social skills, inadequate sexual knowledge, poor self-control, lack of non-deviant sexual arousal as well as the presence of deviant sexual arousal'.

This raises the point mentioned in chapter 1 that these men are not simply people who experience sexual arousal over unusual stimuli. They are men who carry emotions, and cognitions just as everyone

else does. They have very real sexual needs, which currently are being directed in an inappropriate way or to an inappropriate target. They may also have many other needs (as Crawford pointed out), which need to be addressed when developing a care plan.

Gudjonssen gives an excellent summary of the available treatments. The following are some of the less utilised methods (p205).

Empathy training aims to increase self-awareness, social understanding and compassion, although its focus is usually to regulate aggressive behaviour. As the name suggests, clients are trained to empathise with their victims. Attitude change is evidently an indicator of clinical change, and is attempted on three levels. The attitude towards the actual sexual object, towards interpersonal relationships and towards their own sexually variant behaviour. They can be altered by appropriate modelling and feedback, and by challenging client rationalisations, justifications, and intellectualisations. Shaping has been used to systematically reinforce desirable increases in penile response. Self-control techniques teach greater awareness of factors that influence clients' behaviour, and how they may alter these. The process rests on self-monitoring, self evaluation, and self-reinforcement.

Fading is another technique which was developed by Barlow and Agras. By superimposing one slide over another, we can gradually change an undesirable stimulus, such as shoes or urine, to a

heterosexual stimulus, such as adult women[5]. As the client responds sexually, the brightness of the heterosexual slide is increased, and the fetishistic slide decreased. Slides however, may not be enough to excite the clients sexually. The remaining techniques will be covered in greater depth as they provide better therapeutic choices for clients and therapists alike.

Shame therapy is a method devised by Michael Serber. The central goal of shame aversion therapy is literally to shame the patient into reducing his deviant behaviour. The process involves setting up a laboratory situation as close as possible to the real life setting. (Serber had not employed this method with a fetishist at the time of publication, but it may be applicable.) Once the scene is set, the subject is required to perform on demand those acts he is embarrassed about. He is made to continue for up to 35 minutes while a group of observers observe. Serber cites two client selection criteria which must be met for the therapy to be effective (p214).

The client must be ashamed or embarrassed about what it is that he does. The purpose is defeated if he feels no shame.

He must be aware of himself and what he is doing. Serber notes the case of a schizophrenic client who had no knowledge of performing an asocial act once he had done it.

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[5] Unless the client is homosexual in which case the redirection would be to adult men.

The intended result is that the client becomes ashamed of what he is doing and ceases. Serber claims that two to three sessions seem sufficient, perhaps with 'booster sessions' at follow-up dates. This technique has been used successfully in New Zealand (Kensington Centre, Timaru) for an exhibitionist, but not yet for fetishism.

The pertinent question to ask here is "What effect does engendering shame have on the client?" Indeed, shaming the client out of his variant practices may result in a plethora of other disturbances. The cost of this form of therapy needs to be weighed against the benefits to the client himself, his partner/s, family and society in general. It may well be that issues such as low self-esteem become prominent and could lead to alcohol or drug abuse as gratification and confidence boosting. It could be that once the variant response has been dealt with the client simply substitutes one variant sexual behaviour for another. Clinicians should be cautious with clients who may be depressed as the effect of this therapy may be enough for them to suicide.

Shame aversion therapy should thus be used with great discretion and some other form of therapy, the goal of which would be to fill the void left by the departure of the variant thoughts, feelings and behaviours, should be implemented.

Covert sensitisation is an ingenious tactic developed by Cautela and used since the late 1960s. The technique uses imagery to aversively

condition the client. As Cautela and Wisocki (1971, p37-38) so rightly state, therapy of this form has few of the drawbacks of traditional therapies. Chemotherapy (MPA, CPA etc) is typically time consuming, may require hospitalisation, may have serious side effects and often relies on the client for self administration. Electric shock used as an aversive stimulus is also time consuming, is expensive and necessitates a great deal of equipment in the laboratory. They also note that neither method can be used easily as a self-control technique and are difficult to use in private practice.

The benefits of covert sensitisation lie in its methods. Because it uses imagery one needs no equipment other than a reasonable imagination. No equipment is necessary, it can be applied to a vast range of circumstances and clients are less likely to leave therapy through fear as they may do with chemotherapy or electric shock therapy. It can be used pretty much anywhere which means that the client himself can employ it at home. Lastly, Cautela and Wisocki (p38) make the point that 'the habits of sexual behaviours are strengthened by the experience of sexual fantasies related to those behaviours, (and) one may suggest that an imagerial procedure may be more effective in weakening the sexual habit than physical methods.'

The strategy is simple. It assumes that fetishes (and other variations) are a learned response, and clients can thus unlearn them or learn to be averse to them. The client pairs a pleasurable object (shoes,

leather) within a noxious setting (Cautela and Wisocki use a dungeon or cesspool but this part of the treatment is limited only by imagination) with an image of himself vomiting on himself, the erotic target, and all components of the stimulus scenario.

The clinician can ascertain from the client which scenes are most likely to cause displeasure or disgust and what he fears most. Also, for use in anxiety reduction scenes, reinforcers that the client finds acceptable are necessary. The scenes are presented in order from the most desirable to the least desirable and focus on the *approach* to the stimulus object.

The therapist describes a scene to the client while he is relaxed, and is instructed to picture it as vividly as possible, actually feeling the nausea at each stage in his approach to the sexual object. This is followed by the client imagining it by himself, up to ten times a session. (A potential scene is presented in appendix III.) Ten *escape scenes* are employed in which the client approaches the stimulus but rejects it and feels immediate relief. The client is encouraged to practice this technique at home in his own time to strengthen the effect. Cautela and Wisocki claim that clients who successfully remain in treatment (for more than three months) generally redirect their sexual behaviour in a desirable way (p43).

There are some problems with covert sensitisation, despite its usefulness in working with fetish and other paraphilias. It is probable

that therapists will encounter clients whose visualisation skills are poor. Given that the treatment relies on imagery, this is quite an issue. There are some solutions: the therapist can explain and elaborate the scene in greater detail; the therapist can employ more than one sense when describing the scene (e.g. touch); tape recorders can be utilised for those clients who allege they cannot achieve imagery outside of the therapist's office.

There is a problem potentially in the type of fetishist one is treating. Cautela and Wisocki rely on vomit and faeces to disgust the client. In the case of coprophilia (faeces) and urophilia (urine) and even mysophilia (filth) clients may not find the aversive imagery aversive at all. To this end we can solve this problem before it rears its head and determine what will work for those clients. For sure, there are enough disgusting and unpleasant stimuli available to find at least one for everybody. It is suggested that therapists use Wolpe and Lang's (1964) Fear Survey Schedule (ibid, p380) but even a few simple questions should establish what will work for that client. If none are forthcoming, or they appear innocuous, then perhaps the clients motivations and readiness to change can be examined more closely.

As stated already, decreasing the incidence of this variant behaviour is fine, as long as other techniques are used to fill the gap left by the old behaviours. Also, Cautela and Wisocki point out that overgeneralisation does not occur (from fetishistic shoes to *all* shoes for example) so we do not expect to deal with other issues. The lack

of overgeneralisation is attributed to the fact that aversive imagery is paired with *intentions* to perform the variant behaviour, and not the behaviours themselves (ibid, p45).

Maletsky (1974) has taken the treatment further, and helps eliminate the problems of weak aversive stimuli. He utilises what he calls "Assisted" Covert Sensitisation. Here, the original technique of Cautela has been bolstered with the use of valeric acid, a particularly malodorous substance. At critical times during the presentation of the scenes, especially when sexual arousing is mounting, the therapist places an open bottle of valeric acid under the client's nose. The scene progresses, and as the client escapes from the situation the bottle is removed. The client also self-administers valeric acid at home during tape recorded scenes (p370). Maletzsky too, notes the efficacy and applicability of this technique. As a stand-alone method it has some deficits, but in a treatment package is a useful tool. However, other researchers have not had quite the same success. Marshall and Barbaree report that many of their patients did not respond to the procedure. They attribute this to the possibly low imaginal level in clients due to lack of education, or the lack of effect of the consequences, perhaps owing to heightened tolerance of them through time spent in prison, criminal experiences, or punitive child rearing experiences (1979, p299). Therefore, they sought to develop an alternative. After researching sexual behaviour, they concluded that boredom is a significant factor; people will constantly modify

fantasies to keep them interesting. Marshall and Barbaree engineered a procedure that associates boredom with the client's variant sexual fantasies.

The arrangement is that the client is placed alone in a dimly lit room, communicating only by intercom. He is told to verbally express his variant fantasies while he masturbates. He is instructed to masturbate continuously, even if he ejaculates, all the while verbalising his fantasies. This they call *satiation* (p300). Sessions apparently need take no longer than one hour. They have reported success with paedophilia and with fetish. Intense trials with larger numbers of subjects need to be evaluated as there seem to be few publications regarding satiation therapy as a treatment for reducing variant sexual arousal.

Orgasmic reconditioning (OR) sometimes called masturbation reconditioning or masturbation retraining was built on the basis of the classical conditioning paradigm. Here, the Unconditioned Stimulus (UCS) includes the physical feeling and process of masturbation along with the already established variant fantasies. Naturally, the Unconditioned Response (UCR) would include arousal and orgasm. In this model, conditioning occurs by presenting the US and Conditioned Stimulus (CS, the appropriate fantasy), following each other, but before the UCR. After repetition, the CS takes on the ability to elicit elements of the UR, which thus becomes the Conditioned Response (CR), (Marquis, 1970 p.266).

US then CS ..... gives UR

repetition

US then CS ....UR becomes CR

as CS has taken on the power of the US

Basically, the system works such. The client is required to masturbate (UCS) to the point where orgasm (UCR) is unavoidable, using whichever fantasy work best for him (UCS). Just before orgasm (UCR) he is instructed to switch his fantasy (UCS) to the appropriate fantasy (CS). This is done four or five times (which evidently is enough), and he is then required to move the introduction of the appropriate fantasy more toward the *beginning* of the masturbation sequence. If sexual arousal decreases, it is seen as an indicator that he introduced the appropriate fantasy too soon, at which point he is instructed to revert back to the old fantasies, and reintroduce the new fantasy at a higher level of arousal (ibid, p266-267).

Marquis points out five benefits from the therapy.

1. Their variant behaviour can be interpreted as conditioning and not resulting from an inherent character flaw.

2. On top of improving a distressing problem, the method is especially reinforcing as the client gets to have sexual pleasure which is guilt free as it is doctor's orders.

3. The sexually arousing stimuli become socially acceptable.

4. He no longer feels anxieties about the appropriate stimulus,

5. His variant sexual responses are extinguished (p267).

The technique is effective with its results (Marquis lists much improvement in 12 of 14 cases, slight improvement in one, and no improvement in one, p271), and useful in helping the client redirect his fantasies, especially if it is paired with something like covert sensitisation where the *pre-existing* fantasies become noxious.

Nevertheless, it does present a couple of difficulties, as Keller and Goldstein point out. Quite correctly, they note that Marquis uses a classical conditioning model, yes, but that he uses it backwards. Marquis presents the US *before* the CS (pre-existing fantasy before desired fantasy), which, according to Keller and Goldstein who cite Pavlov's work, is the *least* effective method (Keller and Goldstein, 1978, p299)[6]. Presenting the CS before the US is known as forward conditioning, and if we are to follow Keller and Goldstein's rationale, Marquis should be instructing the client to visualise the desired fantasy first, and then use masturbation and the variant fantasy (CS then US).

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[6] If one thinks back to Pavlov's studies, he conditioned dogs to salivate to the sound of a bell. The bell is the CS, the meat they usually salivated to was the UCS, and salivation was the UCR. He presented the bell sound, *then* the meat whereupon the dogs salivated. After repetition, the dogs salivated at the sound of the bell. The CS (bell) goes before the food (UCS) to elicit the properties of the UCR which becomes the CR.

The second issue they raise is that Marquis assumes that orgasm is the crucial unconditioned response. Keller and Goldstein prefer to work with developing an intervention around conditioning of *sexual arousal* - prior to orgasm. They state that Marquis holds the UCR as 'the arousal of orgasm', but that this is incorrect as orgasm is dependent upon arousal and not the other way around (p299). However, Marquis clearly states on p266 that 'the UR would include sexual arousal *and* orgasm' so Keller and Goldstein may be somewhat erroneous in their criticism on that second point. They provide one case study where their revised method (which they call Arousal Reconditioning) was successful. Theoretically it is more technically correct in terms of the proper classical conditioning learning paradigm, although its efficacy has not been proven over that of traditional Orgasmic Reconditioning.

One of the last major therapies is aversion therapy. We have already discussed shame aversion, and aversive imagery or odours are used in Covert Sensitisation, but aversion therapy is a little different with electric shock. Traditionally, the situation follows the notion that an electric shock, paired with the undesirable behaviour, will help eliminate that behaviour. The rationale is that once treatment has concluded and the client feels inclined towards carrying out the past behaviour, he will associate it with a painful electric shock and therefore not complete the act. This is how the behaviour is eliminated in the lab; memory of the experience must suffice after that.

Pinard and Lamontagne (1976, p72) describe a typical situation. Their client was being treated for fetish and masochism. He underwent 18 sessions of electrical aversion, twice daily. In the morning were the fetish treatments, and masochism treatments in the afternoon. For the first nine fetish sessions, he was required to imagine his deviant scenes. When he had a clear image he would signal, and would receive an electric shock to his palm. During the last nine sessions he actually handles and toys with his fetish object. Upon obtaining sexual arousal he would indicate and receive a shock[7].

The technique is not usually used in isolation, sometimes being paired with Aversion Relief. Quite simply, aversion relief provides follow-on escape from the aversive stimulus. Once the shock ceases the client is asked to imagine the desired sexual activity. This is the relief and can usually only be employed if the client is able to visualise desirable scenes comfortably. Gudjonssen (p205) points out that the undesirable side effects may outweigh the benefits.

The final treatment to be discussed is that of Relapse Prevention. This is applied to addictive behaviour within a multidimensional framework. The fundamental goal is to teach the client appropriate skills so that he can anticipate a relapse and deal with it in a safe, effective manner. The term relapse signifies that a behaviour has not

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[7] An interesting variation on this theme is provided by Mastellone who uses a rubber band around the wrist. The setting is the same, but a snap of the rubber band replaces the electric shock. One of the benefits of this is that self-administration is easier and it may act as a deterrent if worn, (1974, p311-312).

been occurring for a time and has recurred. Therapy aims to educate the client in problem solving, problem identification, assessing high-risk situations, life skills, goal setting and so on. To my knowledge, it has not been used to treat fetishism, but I feel its applicability is broad. In alcohol and drug terms, clients must undergo detoxification, and be motivated to change. For the fetishist, the detoxification could be achieved through chemotherapy, or other forms of therapy aimed at reducing the undesirable behaviours. Relapse prevention could then be employed as a supplement to assist the client with remaining free from his earlier fetishistic behaviours. As an adjunct, Ellis' REBT - Rational Emotive Behavioural Therapy - can be employed to guide the client to a greater understanding of his fallacious thinking, apparently irrelevant decisions (AIDs), problem solving strategies, and general cognitions.

Relapse prevention works on a premise that we have control over what we do. In accord with REBT clients learn to understand that what they do is the result of conscious or unconscious *choices.* For the fetishist 'addicted' to his icon, the programme would determine under what conditions he is likely to 'use'; what are his thoughts, feelings and behaviours? The process then is to implement alternative coping strategies for these high-risk situations. The therapist aims to help the client identify his warning signs for using, whether these are situations, feelings, or cognitions. If one subscribes

to the addiction model this form of therapy is very useful if handled correctly.

One needs to be aware that the client doesn't replace one addiction with another, perhaps substituting one fetish for another, or alcohol or drugs. An important aspect here is evaluating the client's motivations for using in the first place (an essential question in any kind of addiction treatment). The client also needs to know that he may slip, and use his fetish object in the future for relief, or gratification, although this isn't an excuse for him to do so. This assumes that in decreasing the undesirable behaviour, the client may still be tempted in the future. If so, and he gives in, he must be able to realise that a slip doesn't mean total collapse and that he should forget everything he has learned. There is a well-known old saying which states that "one swallow doesn't make a summer". For the fetishist this means that a slip is not the total end of recovery. He can still regain recovery by refocussing on his objectives and goals. Research needs to be undertaken to test better the efficacy of this treatment approach. Earle and Crowe (1989) provide therapy for sexual addictions (in which they include fetishism) in terms of the traditional Alcoholics Anonymous (AA) Twelve Step Programme in their book 'Lonely all the time.' In this situation they use the initials SA for obvious reasons. The efficacy of this treatment needs study also in comparison with other treatments.

Clearly there are a vast number of non-chemical treatments available, utilising aversion, retraining, conditioning and so forth. Despite the

great number of choices, there is one underlying feature of all of them. Each is recommended in conjunction with other forms of therapy as part of a comprehensive treatment package.

FOR THE FUTURE

A Pharmacological Proposition

The following chapters deal with the human reward pathways and how they relate to fetish. What this treatment does is break from the traditional models of hormonal medication like the antiandrogens.

The work has been adapted from recent studies on the neurobiology of alcoholism and opiate abuse, and recent papers on reward pathways. To that end, it is obvious that one must accept that to some degree the fetishist is 'addicted' to his token as this is an addiction model.

Olds and Milner discovered by accident in 1954 that when they electrically stimulated certain rat brain structures when the rats were performing particular behaviours, the rats *increased* the frequency of these behaviours. Further experiments in which the rats could stimulate their own brains followed, and the rats showed that given the right location of electrode, they would self-stimulate quite happily. The corollary was that electrical stimulation of the brain can have powerful reinforcing properties.

The *medial forebrain bundle* (MFB) appears to be the most robust location for the actual testing of reinforcement. This is a bundle of nerve fibres that runs on a rostral-caudal route through the basal forebrain and the lateral hypothalamus. It is generally believed that

stimulation of the MFB is reinforcing as it innervates the very same system that natural reinforcers such as water, or sexual contact activate (Carlson, p513). However, behaviour reinforcement by electrical stimulation has been shown in many other areas, including but not limited to the ventral tegmental area (VTA), locus coeruleus, nucleus accumbens, olfactory bulb, caudate nucleus and amygdala. This would imply that the reinforcement system is multilayered and indeed complex.

Perhaps the most important system in reinforcement is the *tegmentostriatal system.* This begins in the VTA with efferent connections in the *nucleus accumbens*, a region situated in the basal forebrain, rostral to the preoptic area and right next to the septum.

Carlson (p514) and Rommelspacher (1995, p23) note that *dopaminergic* neurons are critical in these reward pathways. Dopamine is an amine which, along with norepinephrine and epinephrine form the *catecholamines.* The pathways mentioned here are the major catecholaminergic pathways and as such pass through the MFB on their way forward. Carlson (p515) notes that stimulation of the MFB could theoretically innervate axons from all of the aforementioned systems.

Specifically, the *dopaminergic mesolimbic* system is an essential component in terms of the neurobiological underpinnings of behaviour that is reward-motivated. It has been suggested that this system

works as a filtering and gating mechanism for neural signals that mediate basic biological drives (such as sexual behaviour) and motivational variables (Koob, 1992, p178 and Rommelspacher, p23). The potential implication of these pathways in fetishism and therefore their role in a possible treatment is the focus of the remainder of this thesis.

We know that sex is a natural reward (as are feeding and maternal behaviour, Di Chiara and North, 1992, p190) and we know that behaviours in and of themselves are reinforcing. We also know that in the case of fetishism, the token or item has replaced the species-typical erotic target, that is to say women. The fetish itself is now for all intents and purposes the natural reward as sexual arousal and/or orgasm is only achieved with the aid of the fetish in imagery or reality.

Di Chiara and North identify two important properties of natural rewards. Firstly, the *incentive* aspect which is provided by the characteristics peculiar to the reward, such as smell, taste and feel. The incentive aspect involves ergotropic changes which are aimed at preparing the organism and approaching the reward stimuli. These changes are events such as arousal and activation of motor behaviour, and innervation of the sympathetic nervous system.

The other component is called the *consummatory* aspect. This involves the metabolic and physiological consequences of contact with, interaction with, and consumption of the rewarding stimulus. The

changes taking place here are events like rest, sedation and activation of the parasympathetic nervous system. Di Chiara and North propound that both of these are enjoyable processes but both are necessary for natural reward to be completely reinforcing (p190).

The incentive properties are what makes the reward stimulus attractive to the individual. In the case of fetish it can be the smell (rubber, urine), the feel (leather, canvas) the sight (shoes, long hair) and so forth. These properties are vital in 'learning a behavioural response that is directed to approach the reward stimulus itself' (p190). Dopamine is implicated in this learning process. What is useful for us here is that it is these properties which activate mesolimbic dopamine transmission, which as we have seen is a crucial factor in reward pathways.

The brain's reinforcement system is thus activated, probably either by an increased rate of firing in the VTA dopaminergic neurons, or because the VTA neurons send fibres via the MFB to synapse in the nucleus accumbens which results in a release of dopamine at the nucleus accumbens.

The nucleus accumbens links in with the limbic system (and thus the temporal lobes) and it is believed that dopamine release at the nucleus accumbens lowers the stimulation threshold of limbic system circuits. The particular circuits involved are those related to drive states such as hunger and sex. It achieves this by raising the basal

dopamine release or by raising the basal neuronal firing rate, and the outcome is positive moods akin to euphoria or satiety (Todd, 1994).

The upshot is that because sex is naturally rewarding, and the fetish icon has usurped the place of the conventional erotic target, the fetish has become the surrogate natural reward. The fetishist has been rewarded overtly through sexual arousal, sexual expression, lovemaking, partner response, anxiety reduction and so forth, and rewarded covertly by the dopaminergic reward pathways.

To summarise, the sensory (incentive) properties of the fetish induce mesolimbic dopamine transmission and a dopamine increase at the nucleus accumbens and therefore activation of the limbic system drive state circuits.

Because the fetish item itself is usually non-sexual to begin with their needs to be some kind of association with sexual contact. This model suggests that as the fetish is not a natural reward, it relies more heavily on incentive learning, which again is dopamine based.

This leaves the consummatory aspect of reward behaviours. Di Chiara and North postulate that the consummatory aspect of reward behaviours might be mediated by non-dopaminergic systems; specifically, the endogenous opioid system.

The body produces its own supply of opioid peptides and these have rewarding properties. Rats will increase feeding and drinking behaviours when injected intracerebrally with opioid peptides, and

injection of opioid peptides into the VTA or nucleus accumbens enhances intracranial self-stimulation. Injection will also produce place preference for consumption, and opioid receptor *antagonists* reduce feeding and drinking behaviours and produce strong place aversion for consumption in non-dependent animals (Koob, p179).

Already we have looked at the major activating circuits of the reward system, the dopaminergic and opioid systems. Both of these systems are activating systems. Two others need mentioning. *GABA* (Gamma aminobutyric acid) is the most widely distributed *inhibitory* neurotransmitter in the brain (Koob, p181). Serotonin (5HT) is also an inhibitory transmitter although it is less prevalent than GABA. What they do is prevent neurons from firing continually, which would result in uncontrollable widespread neural activity. This is essentially what happens in a seizure.

Todd (p7) has implicated these neurotransmitters in the reward pathways in their inhibitory role. Given that the behaviours are rewarding, the model would suggest a treatment that would undermine the reward system. To achieve this we could increase the inhibitory effects of 5HT and GABA and/or decrease the excitatory effects of dopamine and the opioid system. Before we discuss this further we need a closer look at 5HT.

Pearson (1990, p233) makes some important points which are relevant here. As well as being listed among the sexual disorders in

DSM, the paraphilias are included as *impulse* disorders under 'Impulse Disorders Not Elsewhere Classified' (for greater discussion on this argument see chapter 2). She quotes Roy and Linnoila[8] who conclude that reduced serotonergic activity is related to poor impulse control, and that the serotonergic antidepressant clomipramine was successful in treating a case of trichotillomania (an impulsive hair pulling condition).

She continues, adding that therapy for the paraphilias is aimed at treating the dual nature of the disorders by addressing the deviant drive and improving impulse control. Typically this has been done through antiandrogenic medication and counselling. Pearson cites two major sources of support for this concept. Firstly, DSM uses the criteria, and secondly, clients experience cravings (impulses) about their particular bent. These cravings, when frustrated are perceived as noxious. Each episode is preceded by a period of increasing tension, and although immediate gratification may occur at the time, guilt and remorse often follow (p233).

Note here the similarity in process to that of alcohol and drug dependence and also to the eating disorder bulimia. Interestingly, the effectiveness of serotonergic antidepressants in managing bulimia and of reducing alcohol consumption with SRIs (Todd, p12) alludes to their usefulness in treating impulse disorders.

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[8] (1988, Suicidal behaviour, impulsiveness and serotonin, *Acta Psychiatrica Scandinavica*, **78**: 529-535)

The outcome is this. Fetishism appears to work as a surrogate natural reward which stimulates the mesolimbic dopaminergic system. The incentive aspect seems dopamine regulated and the consummatory aspect opioid regulated. GABA and 5HT play inhibitory roles in this system. Todd postulates that increasing the levels of GABA or 5HT and decreasing the levels of DA or opioids would result in an effective treatment for alcoholism. I believe that given the similarities between the process of alcoholism and fetish using the reward model, the evidence for decreased serotonergic activity in impulse control, and the implication of DA in learning and sexual behaviour that this treatment can be effectively employed in the treatment of fetishism.

Todd holds that GABA agonists may not be totally safe and could be addictive themselves (p14) calling them 'dirty drugs', the mechanisms of which we do not know enough about. He claims also that DA blockers were ineffective in treating alcoholism. I am unsure of the evidence for using DA blockers in the treatment of fetish, but as DA is crucial to most of the systems discussed we cannot discount it, so we are left with a few possibilities: serotonin agonists, DA blockers and opioid blockers.

SRIs, especially fluoxetine, have been shown to be effective in treating impulse control and depression, and may selectively reduce deviant arousal and possibly facilitate conventional arousal. Furthermore, they are also successful in treating OCDs, which is an important point if one subscribes to the view that fetish is compulsive

rather than impulsive. To a certain degree the argument becomes moot if SRIs are competent in treating both. To this end, the broad treatment capabilities of fluoxetine make it an excellent candidate for use here. By inhibiting the reuptake of serotonin we would hope to achieve the aforementioned desired effects.

The other side of the issue is decreasing the levels of DA and/or opioids in the system. Todd suggests that the opioid blocker naltrexone has been used to good effect in the treatment of alcoholism. Di Chiara and North (p188) state that opioid blockers like naltrexone and naloxone depress self-stimulation from sites including the nucleus accumbens and the VTA, and their effects are consistent with an effect not on performance, but on reward. They note also that the dopamine blocker pimozide and naloxone in a comparison study disrupted food reward without altering initiation. Extrapolated, this would mean that the initiation of sexual contact would not be disrupted, only the reward system. This is a significant break from the global reduction of sex drives evident in antiandrogen use.

Although this treatment has been proposed by Todd for alcoholism, there is an element of addiction in fetishism whether or not we advocate the addiction model. In behaviours such as sex the body releases its own *endogenous opioids*. These have an analgesic effect and heighten the pain threshold. The complex interaction can be seen in masochistic clients, sometimes able to endure intense pain because they are sexually aroused and the endogenous opioid system is

operating. Being opioids they are also addictive. Long distance runners will be familiar with the so-called 'runner's high'. After a certain distance, when the body is tiring, the brain floods the body with endogenous opioids to dull the pains and the athlete is subsequently able to run further with less discomfort. There is the added psychological effect of the flood of these opioids.

The fetishist will be producing his own opioids in times of sexual arousal. These assist the reward process in strengthening the effect as the fetishist becomes aware of the 'high' he may be able to achieve. For this reason an opioid blocker has an important role.

Furthermore, Flor-Henry shows, and this is critical, that *the dopaminergic systems facilitate and serotonergic systems inhibit male sexual behaviour* (p56), and also *that the nigrostriatal and mesolimbic dopaminergic systems are essential in goal-directed behaviour (and thus sexual goal-directed behaviour) that are not hormone dependent* (italics mine). He cites Everitt (1983) who emphasises that 'we must come to terms with the fact that dopaminergic manipulations can affect the expression of sexual behaviour without directly affecting its hormonal determinants'.

Herein lie the links to the addiction model, further evidence to support the applicability to fetish (and sexuality or the paraphilias in general) and thus the treatment.

The proposals then are for a combination of pharmacological treatments, and the options are as follows.

1. Utilising the SRI fluoxetine and the opioid blocker naltrexone

2. Utilising fluoxetine and a DA blocker (e.g. pimozide)

3. Utilising all three.

The result of using the blockers would in effect make the stimulus less rewarding. Essentially, it would become boring. The SRI would enhance impulse control to allow some form of counselling (such as masturbation retraining) to redirect the sexual urge and develop and appropriate erotic target, if indeed this is necessary given some of the claims for fluoxetine.

Todd mentioned that DA blockers had not been entirely successful in treating alcoholism. Quite clearly, dopamine is a major factor in sexual behaviour so we cannot ignore it as a treatment option. I would therefore like to suggest the third option for greater exploration. The reward pathways will be altered in both incentive and consummatory aspects by dopamine and opioid blockers. To my knowledge, fluoxetine combined with naltrexone has not been employed in the treatment of fetishism. Increased serotonin will inhibit sexual behaviour and there is the added effect that decreased dopamine means that sexual behaviour will not be activated.

There is supporting evidence from Kafka and Prentky (1992, p352) who state that 'fluoxetine may potentiate the inhibitory effects of serotonin on the metabolic production or release of dopamine in the midbrain and brain stem'. They continue, emphasising that increases in serotonin transmission and decreases in dopamine transmission both inhibit sexual behaviour, and also (p356) that neuroleptic agents that block central dopamine receptors have been employed to reduce deviant (and normative) sexual arousal.

Issues

Naturally, the more chemicals one ingests at any one time, the more likely one is to have compound effects. Further research needs to be undertaken on the additive effects of these drug combinations to ensure that they are in fact safe to use together and to establish safe dosages. Double-blind placebo controlled studies would also determine the effectiveness of these drugs and the dangers before they can be readily prescribed. As yet the side effects are unknown and the long term effects cannot even be guessed at. We would also need to know how it compared in effectiveness to the existing pharmacological treatments

Fortunately, the ethical considerations of testing are not so great for fetish as for other paraphilias. Ideally the study would involve a

placebo control to test the significance of effect. The difficulty for something like paedophilia is that researchers are ethically unable to use a placebo as those on placebo or in the control group would subsequently reoffend. Measuring the efficacy of the treatment can thus be challenging. This problem is not so evident with fetish. Placebo controlled studies are acceptable if the fetishist is not involved in illegal behaviours in relation to his fetish. Given the nature of the paraphilia, violent or dangerous fetishists are the exception rather than the rule.

Difficulty is also evident when collecting results. In this type of experiment we are looking to measure indices of sexual arousal to various stimuli, evidence of fantasy, masturbation with fantasy, intercourse with fantasy and so forth. In the laboratory setting we can measure sexual arousal by means of the penile plethysmograph, which measures changes in penile tumescence. By presenting various stimuli (movies, slides, photos) we can determine when the client is becoming aroused and more importantly to what stimulus.

To test fantasy we are generally guided by the self-report of the client. Self-reports can be somewhat shaky as a collection technique for they rely on client honesty. Depending upon the clients' motivations for undertaking treatment the results can be more than a little misleading. If for example, the client is an underwear fetishist, and to constantly satisfy his fetish he is stealing women's underwear, he may be facing court charges. In order to avoid prison for trespass, burglary, and so

on, he may well fabricate the truth. He could easily minimise the occurrences of fetishistic thoughts and feelings, to prove that he is 'better'. This needs to be accounted for when analysing results.

CONCLUSION

Summary and Implications

Fetishism is the condition of being recurrently responsive to and dependent upon non-living stimuli to facilitate sexual arousal and orgasm. Fetishes range from mild preferences to extreme necessity. It is almost exclusively a male phenomenon and this suggests that there is a biological substrate. It is currently classified as an impulse disorder although the addiction model is useful here also. The etiology seems to rest on the impairment of evolutionarily determined innate brain circuitry, perhaps through temporal lobe damage as they are implicated in sexual behaviour. During childhood the boy is visually seeking stimuli and endeavouring to indulge in sexual rehearsal play. The visual nature of males' sexual arousal seems to be a higher primate factor. If his play is restricted he will not have the opportunity learn the appropriate behaviours and imprint on the appropriate stimuli. What he does learn becomes a function of the reward pathways in the brain. Dopamine is critical in eliciting approach behaviour and in the activation of sexual behaviour. Opioids are critical in consuming the fetish. Serotonin and GABA are inhibitory neurotransmitters which inhibit sexual behaviours. Traditionally, therapies have involved a global reduction in sex drive

through antiandrogen medication and attempts to reshape the erotic target of the fetishist.

This treatment includes components from most of the etiologies in its development. As it is a pharmacological treatment it has a biological base, working on the neural circuitry. This fits with an innate hard-wired proposition that we have sexual pathways (IRMs). The reward pathways may fill this role. It accounts for the learning theory in that reward is founded on reinforcement in which learning is inherent. Learning too, is biological, involving changes in the neural systems and being dopamine based. This biological approach to learning, including the biology of the reward pathways still allows for Wilson's imprinting theory and Moneys notion of sexual rehearsal play as the children are learning sexual behaviours. If we recall chapter 1, DSM states that fetish has its onset by puberty or earlier, consistent with Money's ideas. The IRMs give us the potential to be sexual with a certain range of stimuli. Imprinting narrows this even further.

Learning involves memory, and memory is a limbic system function. The temporal lobes are prominent in the limbic system and their dysfunction may be implicated in imprinting errors. The fetishist learns (imprinting) to respond to a certain stimuli and finds it pleasurable (rewarding). He is able to respond sexually due to inbuilt systems (IRMs, lovemaps). These may have been damaged through temporal lobe impairment which could also affect visual recognition and thus allow the male to imprint on an inappropriate object. Restricted or

prohibited sexual rehearsal play could further distort the direction of the sexual urges and cause irreparable harm to the lovemap, which can now be seen as being very similar to the IRM and imprinting.

As yet, this treatment has not been tested. There are some promising areas for research in the dopamine based reward pathways and their reaction to manipulation.

Furthermore, there are a some factors which could affect future results. Experimenters could be sensible to examine clients for a history of substance abuse, for depression or mood disorders, anxiety disorders, and co-morbidity. It seems common for clients to have more than one fetish or more that one paraphilia. There are plenty of avenues for study. For the present, perhaps we are a little closer to understanding sexual fetish.

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1994

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APPENDICES

Appendix I

In New Zealand the law states clearly what is considered criminal behaviour and lists the maximum sentence of imprisonment. This appendix lists the more uncommon sexual offences. Rape is the most common illegal form of sexual activity and has not been included here. Sexual assault and sexual harassment have also not been included. For sentences and expansion, see Garrow and Turkington, March 1993, *Criminal Law in New Zealand.* Issue No. 6, Butterworths: Wellington.

S140.2 (p230) "Indecent assault, "indecent act"

Indecent acts fall under the Indecency with Children Act 1960, where you commit an offence if you are involved in an activity with a minor in circumstances of indecency, for example, a passive act such as permitting a child to keep her hand on the accused's penis without more.

S142 (p232) Anal intercourse

Anal intercourse is illegal if the other person is

(a) under 16 years of age

(b) severely subnormal and known by the person to be so.

For the purposes of (b), a person is severely subnormal if that person is mentally subnormal, within the meaning of the Mental Health Act 1969, to the extent that the person is incapable of living an independent life or of guarding himself or herself against serious exploitation or common physical dangers.

An offence is complete upon penetration.

S142A (p234) Compelling indecent act with animal. You commit an offence whether or not this involves penetration.

S143 (p234) Bestiality

S144 (p235) Indecency with animal.

Appendix II

ALPHABETIC LIST OF THE PARAPHILIAS

Acrotomophilia	amputee partner
Adolescentilism	impersonating an adolescent
Andromimetophilia	male impersonator's partner
Apotemnophilia	self-amputee
Asphyxiophilia	asphyxiation
Autagonistophilia	live-show self-display
Autassassinophilia	self-staged own murder
Autonepiophilia	infantilism, wearing nappies
Biastophilia	raptophilia
Catheterophilia	catheter
Chrematistophilia	blackmail payment
Chronophilia	age discrepancy
Coprophilia	faeces
Ephebophilia	adolescent partner
Erotophonophilia	lust, murder
Exhibitionism	indecent exposure
Fetishism	erotic token
Formicophilia	crawling things
Frotteurism	rubbing against a stranger
Gerontophilia	parent - aged partner

Gynemimetophilia	female impersonator partner
Heterophilia	not a paraphilia
Homophilia	not a paraphilia
Hybristophilia	criminal or convict partner
Hyphephilia	tactile fetish
Hypoxyphilia	asphyxiophilia
Infantilism	impersonating a baby
Kleptophilia	stealing
Klismaphilia	enema
Masochism	being injured, humiliated
Mixophilia	scoptophilia
Morphophilia	physique discrepancy
Mysophilia	filth
Narratophilia	erotic storytelling
Necrophilia	corpse
Nepiophilia	infant partner, nappy aged
Olfactophilia	smell fetish
Paedophilia	juvenile partner
Peodeiktophilia	penile exhibitionism
Pictophilia	erotic graphics or films
Raptophilia	rape, biastophilia
Sadism	injuring, humiliating
Scoptophilia	onlooker, mixophilia

Somnophilia	sleeping partner
Stigmatophilia	tattoo, piercing
Symphorophilia	disaster, conflagration
Telephonicophilia	lewd phone calling
Toucheurism	touching a stranger
Transvestophilia	cross dressing
Urophilia	urine
Voyeurism	illicit peeping
Zoophilia	animals

Taken from Money, 1988, p179-180.

Note that sneezing and Austin Metro Cars, referred to in text, are not listed here. One can speculate about an appropriate name for these and other unlisted fetishes such as safety pins, fire and flexed muscles.

Appendix III

Covert sensitisation uses the pairing of the undesirable stimulus within a noxious setting with the client vomiting everywhere. The following has been created as typical of the type of situation (adapted form Cautela and Wisocki, p39-40), but specified for the fetishist.

You are in a dungeon. It is dark, it reeks and is completely disgusting. You begin to get accustomed to what light there is and you make out what looks like a pair of leather female boots in the corner. You begin to approach them thinking just how sexy they look and just how good this is going to be and you take out your penis and start masturbating. As you think this your stomach begins to turn over and feel queasy. Some bile and bits of food come into your throat. They are bitter and they burn. You swallow them back, choking on them. But you continue to approach the boots. The nearer you get, the sicker you feel. You can feel your nose running. Thick green mucous dribbles onto your lips. Your throat and mouth tastes of sick. Your stomach is churning. You reach out to fondle the boots and as you do the vomit forces its way up your throat and you puke. You puke all over the boots, all over the leather and inside them. You puke on yourself, down your front and all over your hand and your penis. You can see the boots are covered in your sick. Chunks of vomit are sliding down the side of the boots. You can see mucous and vomit on them. You can't help throwing up. You puke again and it lands on your penis

again. You are covered in your own puke. Pieces of vomit fall of your penis onto the boots. Your clothes are full of vomit, the boots are full of vomit and your penis is covered in vomit. You turn to run. As you do you trip and fall face first into a puddle of puke. It gets in you mouth, eyes and ears and nose. You dry retch and run. You rush out and as you go you begin to feel better. The further you get the better you feel. When you get into the fresh air you feel great. You go home and clean yourself up.